SEQUENCE LISTING

<110> Anderson, Marilyn A.
Atkinson, Angela H.
Heath, Robyn L.
Clarke, Adrienne E.

<120> PROTEINASE INHIBITOR, PRECURSOR THEREOF AND GENETIC SEQUENCES ENCODING SAME

<130> 9748B

<140> 09/431,500
<141> 1999-11-01

<150> 08/454,295
<151> 1995-09-01

<160> 16

<170> PatentIn Ver. 2.1

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ttcagtgatg atggaacttt tgtttgtgaa ggagagtctg atcctagaaa tccaaaggct 180

tgtaccttaa actgtgatcc aagaattgcc tatggagttt gcccgcgttc agaagaaaag 240

aagaatgatc ggatatgcac caactgttgc gcaggcacga agggttgtaa gtacttcagt 300

gatgatggaa cttttgtttg tgaaggagag tctgatccta gaaatccaaa ggcttgtcct 360

cggaattgcg atccaagaat tgcctatggg atttgcccac ttgcagaaga aaagaagaat 420

gatcggatat gcaccaactg ttgcgcaggc aaaaagggtt gtaagtactt tagtgatgat 480

ggaacttttg tttgtgaagg agagtctgat cctaaaaatc caaaggcctg tcctcggaat 540

tgtgatggaa gaattgccta tgggatttgc ccactttcag aagaaaagaa gaatgatcgg 600

atatgcacca actgctgcgc aggcaaaaag ggttgtaagt actttagtga tgatggaact 660

tttgtttgtg aaggagagtc tgatcctaaa aatccaaagg cttgtcctcg gaattgtgat 720

ggaagaattg cctatgggat ttgcccactt tcagaagaaa agaagaatga tcggatatgc 780

acaaactgtt gcgcaggcaa aaagggctgt aagtacttta gtgatgatgg aacttttgtt 840

ggtgaaggag agtctgatcc tagaaatcca aaggcctgtc ctcggaattg tgatggaaga 900

attgcctatg gaatttgccc actttcagaa gaaaagaaga atgatcggat atgcaccaat 960

ggttgcgcag gcaagaaggg ctgtaagtac tttagtgatg atggaacttt tatttgtgaa 1020

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Lys Ala Cys Thr Leu Asn
1 5

tgt gat cca aga att gcc tat gga gtt tgc ccg cgt tca gaa gaa aag 162
Cys Asp Pro Arg Ile Ala Tyr Gly Val Cys Pro Arg Ser Glu Glu Lys
10 15 20

aag aat gat cgg ata tgc acc aac tgt tgc gca ggc acg aag ggt tgt 210
Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly Thr Lys Gly Cys
25 30 35

aag tac ttc agt gat gat gga act ttt gtt tgt gaa gga gag tct gat 258
Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val Cys Glu Gly Glu Ser Asp
40 45 50

cct aga aat cca aag gct tgt acc tta aac tgt gat cca aga att gcc 306
Pro Arg Asn Pro Lys Ala Cys Thr Leu Asn Cys Asp Pro Arg Ile Ala
55 60 65 70

tat gga gtt tgc ccg cgt tca gaa gaa aag aag aat gat cgg ata tgc 354
Tyr Gly Val Cys Pro Arg Ser Glu Glu Lys Lys Asn Asp Arg Ile Cys
75 80 85

acc aac tgt tgc gca ggc acg aag ggt tgt aag tac ttc agt gat gat 402
Thr Asn Cys Cys Ala Gly Thr Lys Gly Cys Lys Tyr Phe Ser Asp Asp
90 95 100

gga act ttt gtt tgt gaa gga gag tct gat cct aga aat cca aag gct 450
Gly Thr Phe Val Cys Glu Gly Glu Ser Asp Pro Arg Asn Pro Lys Ala
105 110 115

tgt cct cgg aat tgc gat cca aga att gcc tat ggg att tgc cca ctt 498
Cys Pro Arg Asn Cys Asp Pro Arg Ile Ala Tyr Gly Ile Cys Pro Leu
120 125 130

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gca gaa gaa aag aag aat gat cgg ata tgc acc aac tgt tgc gca ggc      546
Ala Glu Glu Lys Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly
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aaa aag ggt tgt aag tac ttt agt gat gat gga act ttt gtt tgt gaa      594
Lys Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val Cys Glu
                155                 160                 165

gga gag tct gat cct aaa aat cca aag gcc tgt cct cgg aat tgt gat      642
Gly Glu Ser Asp Pro Lys Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp
            170                 175                 180

gga aga att gcc tat ggg att tgc cca ctt tca gaa gaa aag aag aat      690
Gly Arg Ile Ala Tyr Gly Ile Cys Pro Leu Ser Glu Glu Lys Lys Asn
        185                 190                 195

gat cgg ata tgc acc aac tgc tgc gca ggc aaa aag ggt tgt aag tac      738
Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly Lys Lys Gly Cys Lys Tyr
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ttt agt gat gat gga act ttt gtt tgt gaa gga gag tct gat cct aaa      786
Phe Ser Asp Asp Gly Thr Phe Val Cys Glu Gly Glu Ser Asp Pro Lys
215                 220                 225                 230

aat cca aag gct tgt cct cgg aat tgt gat gga aga att gcc tat ggg      834
Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp Gly Arg Ile Ala Tyr Gly
                235                 240                 245

att tgc cca ctt tca gaa gaa aag aag aat gat cgg ata tgc aca aac      882
Ile Cys Pro Leu Ser Glu Glu Lys Lys Asn Asp Arg Ile Cys Thr Asn
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tgt tgc gca ggc aaa aag ggc tgt aag tac ttt agt gat gat gga act      930
Cys Cys Ala Gly Lys Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr
        265                 270                 275

ttt gtt tgt gaa gga gag tct gat cct aga aat cca aag gcc tgt cct      978
Phe Val Cys Glu Gly Glu Ser Asp Pro Arg Asn Pro Lys Ala Cys Pro
    280                 285                 290

cgg aat tgt gat gga aga att gcc tat gga att tgc cca ctt tca gaa      1026
Arg Asn Cys Asp Gly Arg Ile Ala Tyr Gly Ile Cys Pro Leu Ser Glu
295                 300                 305                 310

gaa aag aag aat gat cgg ata tgc acc aat tgt tgc gca ggc aag aag      1074
Glu Lys Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly Lys Lys
                315                 320                 325

ggc tgt aag tac ttt agt gat gat gga act ttt att tgt gaa gga gaa      1122
Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr Phe Ile Cys Glu Gly Glu
            330                 335                 340

tct gaa tat gcc agc aaa gtg gat gaa tat gtt ggt gaa gtg gag aat      1170
Ser Glu Tyr Ala Ser Lys Val Asp Glu Tyr Val Gly Glu Val Glu Asn
        345                 350                 355

gat ctc cag aag tct aag gtt gct gtt tcc taagtcctaa ctaataatat      1220
Asp Leu Gln Lys Ser Lys Val Ala Val Ser
    360                 365

gtagtctatg tatgaaacaa aggcatgcca atatgctctg tcttgcctgt aatctgtaat  1280
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Ala Gly Thr Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val
35 40 45

Cys Glu Gly Glu Ser Asp Pro Arg Asn Pro Lys Ala Cys Thr Leu Asn
50 55 60

Cys Asp Pro Arg Ile Ala Tyr Gly Val Cys Pro Arg Ser Glu Glu Lys
65 70 75 80

Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly Thr Lys Gly Cys
85 90 95

Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val Cys Glu Gly Glu Ser Asp
100 105 110

Pro Arg Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp Pro Arg Ile Ala
115 120 125

Tyr Gly Ile Cys Pro Leu Ala Glu Glu Lys Lys Asn Asp Arg Ile Cys
130 135 140

Thr Asn Cys Cys Ala Gly Lys Lys Gly Cys Lys Tyr Phe Ser Asp Asp
145 150 155 160

Gly Thr Phe Val Cys Glu Gly Glu Ser Asp Pro Lys Asn Pro Lys Ala
165 170 175

Cys Pro Arg Asn Cys Asp Gly Arg Ile Ala Tyr Gly Ile Cys Pro Leu
180 185 190

Ser Glu Glu Lys Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly
195 200 205

Lys Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val Cys Glu
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Gly Glu Ser Asp Pro Lys Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp
225 230 235 240

Gly Arg Ile Ala Tyr Gly Ile Cys Pro Leu Ser Glu Glu Lys Lys Asn
245 250 255

Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly Lys Lys Gly Cys Lys Tyr
260 265 270

Phe Ser Asp Asp Gly Thr Phe Val Cys Glu Gly Glu Ser Asp Pro Arg
275 280 285

Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp Gly Arg Ile Ala Tyr Gly
290 295 300

Ile Cys Pro Leu Ser Glu Glu Lys Lys Asn Asp Arg Ile Cys Thr Asn
305 310 315 320

Cys Cys Ala Gly Lys Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr
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Asn Pro Lys Ala Cys Thr Leu Asn Cys Asp Pro Arg Ile Ala Tyr Gly
35 40 45

Val Cys Pro Arg Ser Glu Glu Lys Lys Asn
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Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp Pro Arg Ile Ala Tyr Gly
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Ile Cys Pro Leu Ala Glu Glu Lys Lys Asn
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Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp Gly Arg Ile Ala Tyr Gly
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Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp Gly Arg Ile Ala Tyr Gly
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Ile Cys Pro Leu Ser Glu Glu Lys Lys Asn
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<213> Nicotiana alata

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Lys Ala Cys Thr Leu Asn
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Glu Glu Lys Lys Asn
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Cys Cys Ala Gly Xaa Lys Gly
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